



DEPARTMENT OF THE ARMY
HEADQUARTERS, UNITED STATES ARMY ALASKA
724 POSTAL SERVICE LOOP #5000
JOINT BASE ELMENDORF-RICHARDSON, ALASKA 99505-5000

REPLY TO
ATTENTION OF:

APVR-ROP-G37(TRO)

APR 15 2013

MEMORANDUM FOR SEE DISTRIBUTION

SUBJECT: United States Army Alaska (USARAK) Live Fire Exercise Certification Program
(CG Policy #0-36)

1. References:

- a. Department of the Army Pamphlet 385-63, Range Safety, 30 Jan 12.
- b. Department of the Army Pamphlet 350-38, Standards in Weapons Training, 13 May 09.
- c. Army Regulation 385-10, United States Army Safety Program, 4 Oct 11.
- d. USARAK 350-2, USARAK Range Regulation, 6 Jul 11.
- e. USARAK 350-1, USARAK Training Directive, 1 Nov 12.

2. This policy applies to all users of US Army ranges and/or facilities within the Joint Pacific Alaska Range Complex. All users of Army ranges and facilities are required to adhere to this policy and USARAK Regulation 350-1 and 350-2. Other services or agencies that wish to use Army ranges or facilities must comply with the provisions of this policy and publications listed above or may formally request to operate ranges utilizing their service/agency rules and regulations. When standards in Army publications conflict with another service's standards, the standard providing the higher degree of protection will apply. Requests for such use shall include providing all technical data regarding munitions and weapon systems for review including a formal risk assessment to the USARAK Range Control.

3. Properly conducted maneuver Live Fire Exercises (LFXs) are essential to the realistic training our mission demands. LFXs should be the culmination of deliberate, progressive training programs. The purpose of the LFX Certification Program is to ensure our leaders are prepared to properly plan and safely conduct these challenging exercises. Not only is this program essential to the short-term needs of the force, it is also required for the long-term health of the Army as we develop our leaders.

4. Brigade and Battalion Commanders within USARAK will establish formal live fire certification programs within their organizations in accordance with (IAW) USARAK CG Policy #0-36. The two objectives of these certification programs are to train safely and train

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realistically. Leaders must accomplish these two objectives simultaneously; one cannot be prioritized over the other.

5. Definitions.

a. Standard Range Live Fire Event. Standard ranges are defined as ranges that utilize a manual of fire as defined by a Field Manual (FM), have a fixed firing line, do not involve maneuver, and involve no movement forward of firing line/firers once firing begins. Standard ranges are typically used for qualification/marksmanship, ambushes (minus the assault phase), defensive LFXs, and also include demolition areas and indirect firing points. Scenario driven movement down range to a new static position (i.e. single mover/firer stress shoot) constitute a standard range. Short range or close quarter marksmanship flat ranges that involve controlled engagements while moving forward are considered standard ranges if control measures are in place to keep the firing line moving forward together. It is up to the unit's discretion to ensure fire control, distribution, and overall range safety. Units will adhere to USARAK Regulation 350-2 when conducting a static range.

b. Nonstandard Live Fire Events. A nonstandard range deviates from the designed purpose of the given range and/or is outside an established range. Because of the limitations of the Army's permanent range system, most live fire training activities beyond individual weapons qualification must be done on nonstandard or "special firing course" ranges. Trainers are encouraged to propose such courses and will receive full support from Range Control in development. LFXs can include both mounted and dismounted maneuver exercises at fixed range facilities, non-standard unit-derived scenarios at available training areas and ranges, and Combined Arms Live Fire Exercises (CALFEXs). CALFEXs are LFXs that include integration of at least one other combat multiplier not organic to the host maneuver unit.

6. Battalion commanders will certify their leaders two levels down in the planning and conduct of a LFX; Brigade commanders will monitor the program. Battalion commanders will certify leaders. LFX certification will be conducted for all leaders in the position of squad leader through company commander and for key personnel involved in the planning and execution of a LFX. These personnel must be recertified annually. This requirement is in addition to those outlined in DA Pamphlet 385-63 and USARAK Regulation 350-2 for all range Officers in Charge (OICs) and Range Safety Officers (RSOs). Battalion commanders must document all personnel they certify and provide a copy of the documentation to Range Control.

7. Certification programs will consist of written and practical exercise components. At a minimum, such programs will incorporate three phases. Units can tailor this training based on mission, organization, and type of maneuver LFX.

a. Phase I. Range safety and orientation briefing. Once certified by battalion/squadron commanders perspective OIC s and RSOs will complete the online Range Officers Professional

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Development Phase 4A Range Safety Course Basic at

<https://srp2.army.mil/training/layouts/student/studenttrainingmain.aspx>. Once satisfied through training and testing that individuals are qualified to perform the duties of OIC and RSO of the firing unit, battalion/squadron commanders will forward their names to Range Control. Range Control will provide personnel designated as OICs and RSOs range safety briefing on the use of the training complex to complete the certification process.

b. Phase II. Individual study/written exam. This training is required for all leaders, squad leader through company commander level, and for key personnel involved in the planning of a LFX. Battalion commanders are responsible for administering a comprehensive written exam that covers, at a minimum, the certification, validation, and execution of LFXs IAW the USARAK LFX CG Policy #036 and USARAK Reg 350-2, Chapter 8. The enclosed written exam is an example of the content that should be addressed in the test. Battalion commanders can use the USARAK example, or create their own test to cover content they deem essential for the planning and execution of a LFX.

c. Phase III. Battalion commanders (or representative) will conduct hands-on training for exercise planning. In this phase, company commanders, platoon leaders, and first sergeants plan maneuver LFXs under the guidance and supervision of the battalion commander.

8. Prior to the execution of a LFX, the exercise will be validated by conducting a concept backbrief and a recon of the range with the battalion commander or his designated representative. Battalion commanders validate all LFXs

9. We must train as we fight, and we will do so as we manage risks associated with this critical training. The understanding, knowledge, and experience gained by synchronization of fire, maneuver and weapons effects, is essential in preparing our leaders and Soldiers for contingency operations in the future.

10. The point of contact for this memorandum is G3/7 Training Readiness Oversight at 384-1495.



MICHAEL X. GARRETT
Major General, USA
Commanding

2 Encls

1. LFX Certification Written Exam
2. LFX Certification Exam Answer Key

DISTRIBUTION: A



USARAK Live Fire Certification Test

(Example)

Name: _____
Unit: _____
Date: _____

Instructions: The USARAK Live Fire Certification Test is intended to be an open-book, take-home test. This test consists of 20 multiple-choice, fill in the blank, short answer questions, and practical exercises (See Attached Document for PE Worksheets). Each individual must achieve a score of 80% to pass this test. The references listed below should be utilized to take this test.

Required Material: Pen, Pencil, Protractor, Compass, Ruler, References (Below)

References:

1. USARAK CG Policy #0-36, Live Fire Exercise Certification Program.
2. AR 385-63, Range Safety, 20 January 2012.
3. DA Pamphlet 385-63, Range Safety, 30 January 2012.
4. DA Pamphlet 385-64, Ammunition and Explosives Safety Standards, 24 May 2011.
5. USARAK 350-2, 6 July 2011.

Live-Fire Certification Test:

1. The maximum distance a projectile (to include guided missiles and rockets) will travel when fired or launched at a given quadrant elevation with a given charge or propulsion system is called:

_____.

2. What are the components of a small arms SDZ?

_____.

3. The _____ is the imaginary straight line drawn between the firing point and the target. This is also referred to as the line of fire.

4. The area within the SDZ located between the Gun Target Line and the Ricochet area, which accounts for individual error, gun or cannon tube wear, propellant temperature is called

_____.

USARAK Live Fire Certification Test



(Example)

5. What are the requirements to participate in a live-fire exercise?

6. What is the Distance X for a M855A1 at 4000' AGL?

7. According to DA PAM 385-63, what is the minimum rank requirement for an NCO to serve as a Range Safety Officer for a mortar live fire exercise?

8. According to USARAK 350-2, how many days prior to the execution of a live fire exercise start date must the OIC and RSO make final coordination with Range Control to schedule a range walk to verify complete range set up?

9. What is Area "A" and "B" for mortars? What are the distances for each?

Caliber	Area A	Area B
60mm		
81mm		
120mm		

10. According to USARAK 350-2, the OIC must meet with the Range Facility Specialist a minimum of _____ in advance of a live-fire exercise to discuss feasibility, location(s), environmental restrictions, and other general requirements.

USARAK Live Fire Certification Test



(Example)

11. When conducting live fire exercises with mortars and artillery, probable errors are computed in two measurements: _____ and _____.

12. When determining a mortar SDZ, Distance X defined as the

_____.

13. According to DA Pam 385-63, a completed live-fire exercise plan includes four elements. List them.

_____.

_____.

_____.

_____.

14. When must you use a batwing SDZ to plan live-fire training?

_____.

_____.

_____.

15. According to DA Pam 385-63, what are the three types of danger zones?

_____.

_____.

_____.

16. Draw a Cone SDZ

Map Scale	1:50,000
Weapon System	M2
Ammunition	M2 Ball
Impact Media	Earth

USARAK Live Fire Certification Test



(Example)

17. Draw a Batwing SDZ

Map Scale	1:25,000
Weapon System	M240
Ammunition	M80
Impact Media	Steel

18. Draw a Movement Box SDZ

Map Scale	1:25,000
Weapon System	M4
Ammunition	M855
Impact Media	Earth

19. Draw an Indirect Fire SDZ

Map Scale	1:50,000
Weapon System	M224
Ammunition	M720
Charge	4
Impact Media	Earth

20. Who is the approving authority for a command safety certification for artillery and mortar live-fire ranges? How long is a command safety certification valid?



USARAK Live Fire Certification Test

(Answer Key)

Name: _____

Unit: _____

Date: _____

Instructions: The USARAK Live Fire Certification Test is intended to be an open-book, take-home test. This test consists of 20 multiple-choice, fill in the blank, short answer questions, and practical exercises (See Attached Document for PE Worksheets). Each individual must achieve a score of 80% to pass this test. The references listed below should be utilized to take this test.

Required Material: Pen, Pencil, Protractor, Compass, Ruler, References (Below)

References:

1. USARAK CG Policy #0-36, Live Fire Exercise Certification Program.
2. AR 385-63, Range Safety, 20 January 2012.
3. DA Pamphlet 385-63, Range Safety, 30 January 2012.
4. DA Pamphlet 385-64, Ammunition and Explosives Safety Standards, 24 May 2011.
5. USARAK 350-2, 6 July 2011.

Live-Fire Certification Test:

1. The maximum distance a projectile (to include guided missiles and rockets) will travel when fired or launched at a given quadrant elevation with a given charge or propulsion system is called _____.

Answer: Distance X (DA Pam 685-63, p. 219).

2. What are the components of a small arms SDZ?

Answer: Distance X, Ricochet Area (5 deg), Dispersion Area (5 deg) and Area "A and ("B" if required). (DA Pam 685-63, p. 24-25).

3. The _____ is the imaginary straight line drawn between the firing point and the target.

Answer: Gun Target Line (DA Pam 685-63, p. 220).



USARAK Live Fire Certification Test

(Answer Key)

4. The area within the SDZ located between the Gun Target Line and the Ricochet area, that accounts for individual error, gun or cannon tube wear, propellant temperature is called _____.

Answer: Dispersion Area (DA Pam 685-63, p. 219).

5. What are the requirements to participate in a live-fire exercise?

Answer:

- **Make certain that all individual gunners who will take part in live-fire exercises, including fighting vehicle, tank, and aviation gunners, have fired and passed a qualification course for the weapon or system they will fire in the exercise.**
- **Conduct rehearsal (dry run) exercises prior to the live-fire and maneuver exercise.**
- **Orient participants on the capabilities of the weapons used by other components in the CALFEX/CAX.**
- **Designate individuals (such as observer-controllers) who are not part of the tactical or administrative scheme to monitor safety. (DA Pam 685-63, p. 197-198).**

6. What is the Distance X for a M855A1 at 4000' AGL?

Answer: 3,980 meters (DA Pam 685-63, p. 34).

7. According to DA PAM 385-63, what is the minimum rank requirement for an NCO to serve as a Range Safety Officer for a mortar live fire exercise?

Answer: An E-6 can serve as an RSO for a Mortar LFX (DA Pam 385-63).

8. According to USARAK 350-2, how many days prior to the execution of a live fire exercise start date must the OIC and RSO make final coordination with Range Control to schedule a range walk to verify complete range set up?

Answer: NLT 10 days prior to the exercise start date (USARAK 350-2 P. 73).



USARAK Live Fire Certification Test

(Answer Key)

9. What is Area “A” and “B” for mortars and what are the distances for each?

Caliber	Area A	Area B
60mm	250	300
81mm	400	400
120mm	600	600

Answer:

1. **Area A - The secondary danger area (buffer zone) that laterally parallels the impact area or ricochet area (depending on the weapon system) and contains fragments, debris, and components from frangible or explosive projectiles and warheads functioning on the right or left edge of the impact area or ricochet area.**
2. **Area B - The secondary danger area (buffer zone) on the downrange side of the impact area and Area A which contains fragments, debris, and components from frangible or exploding projectiles and warheads functioning on the far edge of the impact area and Area A. (DA Pam 685-63, p. 101).**

10. According to USARAK 350-2, the OIC must meet with the Range Facility Specialist a minimum of _____ in advance of a live-fire exercise to discuss feasibility, location(s), environmental restrictions, and other general requirements.

Answer: Six weeks (USARAK 350-2, p. 72).

11. When conducting live fire exercises with mortars and artillery, probable errors are computed in two measurements: _____ and _____.

Answer: Range and Deflection (DA Pam 385-63, p. 100).

12. When determining a mortar SDZ, Distance X is defined as the...

_____.

Answer: The maximum range of the weapon system at a given charge. Distance X will not be less than the maximum range of the greatest charge to be fired. (DA Pam 385-63, p. 100).



USARAK Live Fire Certification Test

(Answer Key)

13. According to DA Pam 385-63, a completed live-fire exercise plan includes four elements. List them.

Answer: (DA Pam 385-63, p. 198).

- A detailed plan of maneuver and fire support
- A list of weapons, ammunition, pyrotechnic or smokes, and chemicals to be used
- Unit control measures, including means of communication
- Terrain feature and facilities required

14. When must you use a batwing SDZ to plan live-fire training?

Answer: It should be applied when designing or conducting training on ranges that involve fire and movement, fire and maneuver, flanking fire, and/or when ricochet hazards outside the range boundary may endanger nonparticipating personnel. (DA Pam 385-63, p. 24).

15. According to DA Pam 385-63, what are the three types of danger zones?

Answers:

- Laser surface danger zone (air-to-ground; ground-to-ground). (p. 13)
- Surface danger zone (ground-to-ground). (p. 14)
- Weapons danger zone (air-to-ground). (p. 22)

16. Draw a Cone SDZ

Map Scale	1:50,000
Weapon System	M2
Ammunition	M2 Ball
Impact Media	Earth

17. Draw a Batwing SDZ

Map Scale	1:25,000
Weapon System	M240
Ammunition	M80
Impact Media	Steel



USARAK Live Fire Certification Test

(Answer Key)

18. Draw a Movement Box SDZ

Map Scale	1:25,000
Weapon System	M4
Ammunition	M855
Impact Media	Earth

19. Draw an Indirect Fire SDZ

Map Scale	1:50,000
Weapon System	M224
Ammunition	M720
Charge	4
Impact Media	Earth

20. Who is the approving authority for a command safety certification for artillery and mortar live-fire ranges? How long is a command safety certification valid?

Answer: Battalion or separate battery/company commander. They are valid for one year from the date of issue. (USARAK 350-2, p. 65).